

**In the Claims:**

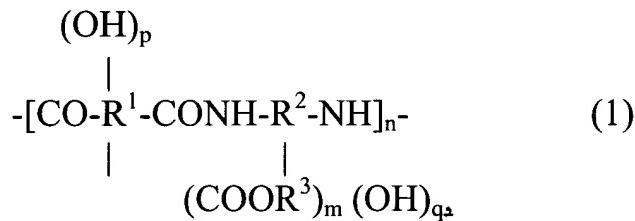
This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A positive-working photosensitive resin precursor composition which is characterized in that it contains (a) a polymer in which structural units of the kind denoted by general formula (1) below are the chief component and (b) a photoacid generator, and the total carboxyl groups contained in said polymer is from 0.02 to 2.0 mmol/g[,:]

wherein one of the following conditions (A) and (B) is satisfied.

(A) a residual chlorine ion concentration is 30 ppm or less

(B) a residual quantities of sodium, potassium and iron ions is 10 ppm or less



wherein one of the following conditions (A) and (B) is satisfied:

(A) a residual chlorine ion concentration is 30 ppm or less, or

(B) a residual quantity of sodium, potassium and iron ions is 10 ppm or less,

[(] wherein R<sup>1</sup> is an organic group of valency from 3 to 8 having at least 2 carbon atoms, R<sup>2</sup> is an organic group of valency from 2 to 6 having at least 2 carbon atoms, R<sup>3</sup> is hydrogen or a monovalent organic group with from 1 to 10 carbons but it is not all hydrogen nor is it all a monovalent organic group with from 1 to 10 carbons. n is an integer of value from 3 to 100,000, m is 1 or 2, p and q are integers of value from 0 to 4 p + q > 0 [)], and

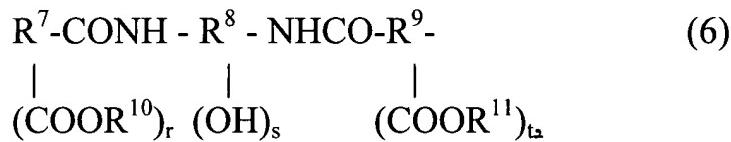
wherein some of the carboxyl groups of the polymer represented by general formula (1) are imidized by reaction with an adjacent amide group, and the percentage such imidization is from 1% to 50% of said carboxyl groups of the polymer represented by general formula (1).

2. (Original) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that the photoacid generator is a quinone diazide compound.

3. (Canceled)

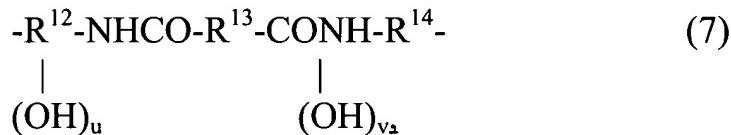
4. (Previously Presented) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that the absorbance of the polymer represented by general formula (1) at 365 nm is no more than 0.1 per 1  $\mu\text{m}$  of film thickness.

5. (Currently Amended) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that  $\text{R}^1(\text{COOR}^3)_m(\text{OH})_p$  in general formula (1) is represented by the following general formula (6)[.]:



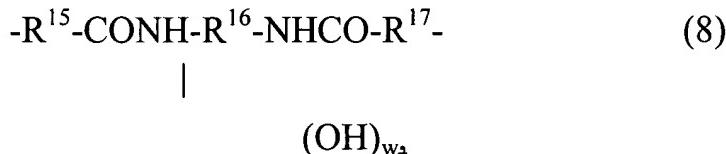
[() wherein  $\text{R}^7$  and  $\text{R}^9$  represent  $\text{C}_2$  to  $\text{C}_{20}$  organic groups of valency 3 or 4,  $\text{R}^8$  represents a hydroxyl group-containing  $\text{C}_3$  to  $\text{C}_{20}$  organic group of valency from 3 to 6, and  $\text{R}^{10}$  and  $\text{R}^{11}$  each represent hydrogen or a  $\text{C}_1$  to  $\text{C}_{10}$  monovalent organic group[.],  $\text{R}^{10}$  and  $\text{R}^{11}$  are not all hydrogen atoms, nor are they all  $\text{C}_1$  to  $\text{C}_{10}$  monovalent organic group.  $r$  and  $t$  represent the integers 1 or 2, and  $s$  denotes an integer of value from 1 to 4[)].

6. (Currently Amended) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that  $\text{R}^2(\text{OH})_q$  in general formula (1) is represented by the following general formula (7)[.]:



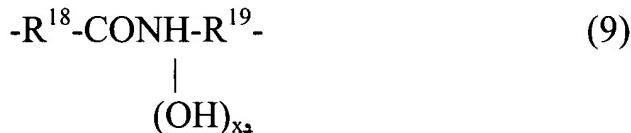
[() wherein  $\text{R}^{12}$  and  $\text{R}^{14}$  represent hydroxyl group-containing  $\text{C}_2$  to  $\text{C}_{20}$  organic groups of valency 3 or 4, and  $\text{R}^{13}$  represents a  $\text{C}_2$  to  $\text{C}_{30}$  divalent organic group[.], and  $u$  and  $v$  represent the integer 1 or 2.[)].

7. (Currently Amended) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that  $\text{R}^2(\text{OH})_q$  in general formula (1) is represented by the following general formula (8)[.]:



[() wherein R<sup>15</sup> and R<sup>17</sup> represent C<sub>2</sub> to C<sub>30</sub> divalent organic groups, and R<sup>16</sup> represents a hydroxyl group-containing C<sub>2</sub> to C<sub>20</sub> organic group of valency from 3 to 6[.], and w represents an integer in the range from 1 to 4[]].

8. (Currently Amended) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that R<sup>2</sup>(OH)<sub>q</sub> in general formula (1) is represented by general formula (9)[.]:



[() wherein R<sup>18</sup> represents a C<sub>2</sub> to C<sub>30</sub> divalent organic group, and R<sup>19</sup> represents a hydroxyl group-containing C<sub>2</sub> to C<sub>20</sub> organic group of valency from 3 to 6[.], and x represents an integer in the range from 1 to 4[]].

9. (Original) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that, in the polymer represented by general formula (1), at least 50% of R<sup>1</sup>(COOR<sup>3</sup>)<sub>m</sub>(OH)<sub>p</sub> are groups represented by general formula (6), and the group represented by R<sup>2</sup> is a divalent diamine compound residual group which does not contain a hydroxyl group.

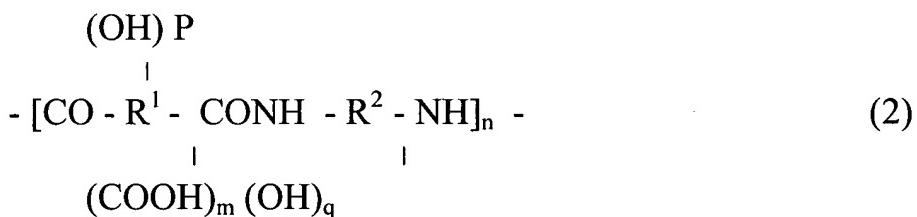
10. (Original) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that, in general formula (1), at least 50% of R<sup>2</sup>(OH)<sub>q</sub> is a group represented by general formula (7), and the group represented by R<sup>1</sup> is a tetracarboxylic acid residual group.

11. (Original) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that, in general formula (1), at least 50% of R<sup>2</sup>(OH)<sub>q</sub> is a

group represented by general formula (8), and the group represented by R<sup>1</sup> is a tetracarboxylic acid residual group.

12. (Original) A positive-working photosensitive resin precursor composition according to Claim 1 which is characterized in that, in general formula (1), at least 50% of R<sup>2</sup>(OH)<sub>q</sub> is a group represented by general formula (9), and the group represented by R<sup>1</sup> is a tetracarboxylic acid residual group.

13. (Currently Amended) A method of producing a positive-working photosensitive resin precursor composition according to Claim 1, ~~comprising which is characterized in that the compound represented by the general formula (1) is produced by treating a polymer in which structural units represented by general formula (2) below are the chief component with at least one type of compound represented by general formulae (3), (4) or (5) below to produce the compound represented by general formula (1):~~



[() wherein R<sup>1</sup> is an organic group of valency from 3 to 8 having at least 2 carbon atoms, and R<sup>2</sup> is an organic group of valency from 2 to 6 having at least 2 carbon atoms. n is an integer of value from 3 to 100,000, m is 1 or 2, p and q are integers of value from 0 to 4 and p + q > 0].,





[() wherein R<sup>4</sup> and R<sup>5</sup> represent a hydrogen atom or a monovalent organic group, nitrogen-containing organic group or oxygen-containing organic group with at least one carbon atom[], R<sup>6</sup> represents a monovalent organic group with at least one carbon[.], and R<sup>7</sup> represents a divalent organic group, nitrogen-containing group or oxygen-containing organic group with at least one carbon atom[]].

14. (Original) A method of producing a positive-working photosensitive resin precursor composition according to Claim 13 which is characterized in that the compound represented by general formula (3) is an N,N-dimethylformamide dialkyl acetal.

15. (Original) A method of producing a positive-working photosensitive resin precursor composition according to Claim 13 which is characterized in that the compound represented by general formula (5) is cyclohexyl vinyl ether.

16. (Currently Amended) A semiconductor passivation layers layer, a semiconductor device protective ~~films~~ film or an interlayer ~~dielectries of dielectric~~ for multilayer interconnects for high density mounting comprising heat-resistant resin coating formed ~~by means~~ of the photosensitive resin composition of claim 1.